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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,293

05/09/2006

Maurizio Galimberti

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EXAMINER

NUTTER, NATHAN M

ART UNIT

PAPER NUMBER

1796

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/533,293	<b>Applicant(s)</b> GALIMBERTI ET AL.	
	<b>Examiner</b> Nathan M. Nutter	<b>Art Unit</b> 1796	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 35-69 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04-05</u> .   | 6) <input type="checkbox"/> Other: ____.                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 35-46 and 57-69 ARE rejected under 35 U.S.C. 102(E) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Teratani (US 6,391,971), newly cited.

The reference to Teratani teaches the process of making a master batch comprising a diene elastomeric polymer with a polyamide in the form of short fibrils, and subsequently adding this master batch into an additional diene elastomer, as herein recited. Note the Abstract, column 3 (lines 11-23), column 4 (line 33) to column 5 (line 35) for the process steps, the compounding ingredients including the particulates claimed herein, in the size range as recited herein. The addition of silica is taught at column 6 (lines 30-46). Further, note column 7 (lines 12-26) and column 8 (lines 28 et

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seq.) for the process steps as recited in claims 41 and 42. Note column 9 (lines 37-40) for the pelletization of the product (claim 43). Further, note column 12 (lines 10 et seq.) for the preparation of the master batches. Note the Table at columns 13 and 14 for the inclusion of carbon black and short fibers (claims 36-40 and 62). The reference specifically teaches the melting point of polyamides as embracing that recited herein at 190° C to 240° C at column 4 (lines 47-50).

The reference teaches the inclusion of the claimed constituents recited herein in the manufacture of a diene rubber containing master batch, for subsequent intended blending with another diene elastomer. As such, the claims would be anticipated by the reference. The reference teaches the employment of a “second diene based elastomer,” the use of an identical elastomer would clearly be an obvious choice. As such, the instant claims are deemed to be at least obvious, if not anticipated by the teachings of the reference.

### ***Claim Rejections - 35 USC § 103***

Claims 35-47, 52, 53 and 56-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teratani (US 6,391,971) as applied to claims 35-46 and 57-69 above, and further in view of Ogawa et al (US 4,328,133), newly cited.

The reference to Teratani teaches the process of making a master batch comprising a diene elastomeric polymer with a polyamide in the form of short fibrils, and subsequently adding this master batch into an additional diene elastomer, as herein recited. The reference fails to teach the use of styrene containing resins as a suitable thermoplastic to employ with the first diene elastomer.

The reference to Ogawa et al shows the blend of a first diene elastomer with a styrene-containing polymer, as micro-fibers of the size as herein contemplated, to obtain a master batch for further inclusion of an elastomer, as herein recited. Note column 2 (lines 8-55) for the elastomer and styrene polymer blend, with additional constituents. Note the paragraph bridging column 2 to column 3 for the size ranges of the styrene micro-fibers. The production of the master batch is shown at column 3 (lines 48 et seq.).

The employment of the micro-fiber polystyrene constituent, as taught by Ogawa et al in a process of making a master batch and subsequent use thereof for diene elastomers would have been an obvious choice in view of the teachings of the references. The substitution of one thermoplastic for the other would certainly yield expected results.

Claims 35-49 and 57-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teratani (US 6,391,971) as applied to claims 35-46 and 57-69 above, and further in view of Ding et al (US 6,590,033), newly cited.

The reference to Teratani teaches the process of making a master batch comprising a diene elastomeric polymer with a polyamide in the form of short fibrils, and subsequently adding this master batch into an additional diene elastomer, as herein recited. The reference fails to teach the use of cyclic olefin copolymer resins as a suitable thermoplastic to employ with the first diene elastomer.

The reference to Ding et al shows the compatibility of diene elastomers with cyclic olefin copolymers. The compounding of such is shown at column 5 (lines 7-18 and 48-61). Subsequent choice of a cyclic olefin copolymer for a diene elastomer blend would have been an obvious choice since the compatibility is shown by the reference for use together.

Claims 35-46, 50, 51, 54, 55 and 57-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teratani (US 6,391,971) as applied to claims 35-46 and 57-69 above, and further in view of Asada et al (US 2002/0052447), newly cited.

The reference to Teratani teaches the process of making a master batch comprising a diene elastomeric polymer with a polyamide in the form of short fibrils, and subsequently adding this master batch into an additional diene elastomer, as herein recited. The reference fails to teach the use of polyester or poly(phenylene ether) resins as a suitable thermoplastic to employ with the first diene elastomer.

The reference to Ding et al shows the compatibility of diene elastomers with polyester and poly(phenylene ether) resins. The compounding of such is shown at column paragraphs [0029] and [0098]. Subsequent choice of a polyester or poly(phenylene ether) resin for a diene elastomer blend would have been an obvious choice since the compatibility is shown by the reference for use together.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nathan M. Nutter/  
Primary Examiner, Art Unit 1796

nmn

18 September 2008

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